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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/535,733	03/27/2000	Jeffrey Alan Millington	60,314-110	4155

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LOWE HAUPTMAN GILMAN & BERNER, LLP
1700 DIAGNOSTIC ROAD, SUITE 300
ALEXANDRIA, VA 22314

EXAMINER	
AMINI, JAVID A	

ART UNIT	PAPER NUMBER
2672	19

DATE MAILED: 09/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/535,733	MILLINGTON ET AL.	
	Examiner	Art Unit	
	Javid A Amini	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-9,11-15,17,18 and 22-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 November 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

Applicant's arguments, see page 2, filed June 09, 2004, with respect to the reference Millington (U.S. patent No. 6,175,801B1) have been fully considered and is persuasive. The reference Millington from pervious office action rejection has been withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 30 rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. "Desired intensity is approximately 25%" critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Applicant should provide the significant of approximately 25%? Applicant should also provide the steps for measuring the intensity?

Note: Applicant canceled claim 19 on page 1, line 16 of Amendment dated November 13, 2003. Then the dependent claims 20 and 21 are canceled in this office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3-9, 11-15, 17-18, and 22-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Person US patent 5,067081, and further in view of Komura et al. (hereinafter refers as a Komura).

1. Claim 3,

Regarding claim 3, "wherein the less detailed desired cartographic entity is no cartographic entity". Person discloses (cols. 14 and 15, lines 65-67;1-3) the effect of this invention is to tailor a more detailed electronic map to the precise needs of the user, thereby filtering out the unnecessary information and permitting significantly more useful information within the confines of the display screen. Person does not explicitly specify the terms "on" and "off" roads modes, however the step is well known in the art because Komura in col. 1, lines 27-34 teaches as a prior art a method wherein, in order to heighten the estimation accuracy of the position of the vehicle itself, a receiver in a GPS (Global Positioning System) or a receiver for location beacons (sign posts), which are radio beacons installed on roads for transmitting the absolute positional information items thereof, is mounted, and the received information of the system or beacon is used in combination with the data of the aforementioned travel distance or current azimuth angle. And also Komura in col. 2, lines 8-13 teaches as a prior art the current position is forcibly displayed on the road in a case where the vehicle actually misses the road on which the current position is displayed and where it lies at a position, such as a back street, which is not contained in the road information of the map data. Komura in col. 5, lines 55-68 and equation 14 teaches that the second term of the right-hand side of Eq. (14) denotes a cost concerning the transformation of the running trajectory AB (can be consider as an off road indication see fig. 23), and the first term denotes the degree of disagreement of the transformed

route. Letter W indicates the weighting of both the costs, and the degree at which the transformation is allowed heightens, as the value W is smaller. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Komura into Person in order to improve by adding the Komura's method that contains the Eq. 14 that can determine a route that does not use any roads, as when vehicle is off-road. This modification of the two references would have been beneficial to the user unlike other navigational systems is significantly less costly, and can be a portable device.

2. Claim 4,

Regarding claim 4, "determining an operational mode of the navigation system, wherein the navigation system includes first and second operational modes with the first operational mode comprises on road mode in which a vehicle position is displayed relative to a road system and the second operational mode comprises off-road mode in which the vehicle position is displayed irrelative to a road system; selecting a desired cartographic entity for a cartographic feature based upon the cartographic feature in the first operational mode and selecting a more detailed desired cartographic entity than the less detailed cartographic entity for the same cartographic feature in the second operational mode; and displaying the selected desired cartographic entity on the video display". Person discloses in (col. 7, lines 56-60) for selecting a desired cartographic entity. Person discloses Fig. 4 more than two operational modes (all, cities, roads, land) and the power on initialize that determining an operational mode of the navigation system. Person does not explicitly specify the terms "on" and "off" roads modes, see rejection of claim 3.

3. Claim 5,

Regarding claim 5, "wherein a first cartographic entity is displayed when navigation system is in off-road mode and said first cartographic entity is not displayed with the navigation system is in on-road mode". Person discloses in Fig. 4 the operation mode "ALL" that will display the cartographic entity; it can be either on or off road mode. see rejection of claim 3.

4. Claim 6,

Regarding claim 6, "Wherein the navigation system includes a third operational mode comprising on-road guidance mode, and step b) includes selecting a least detailed desired cartographic entity that is one of the same as the less detailed desired cartographic entity and a less detailed version of the less detailed desired cartographic entity the less detailed desired cartographic entity for the on-road mode.

Person discloses (Col. 14, lines 59-65) that the user may use the system to navigate between the present location and any final or intermediate destination by setting the width of a path between the two points and calling up the same information falling within this designated path. This provides a list of population centers, roads, major buildings, and other landmarks to be looked for along the way as a guide for the user. see rejection of claim 3.

5. Claims 7 and 8,

Regarding claim 7, "determining an operational mode of navigation system wherein the navigation system includes first and second operational modes and the first operational mode is defined by a predetermined vehicle speed; selecting a desired cartographic entity for a cartographic feature based upon reaching the predetermined vehicle speed in the first operational mode including selecting a less detailed desired artographic entity for the cartographic feature at the predetermined vehicle speed in the first operational mode and selecting a more detailed

desired cartographic entity than the less detailed desired cartographic entity for the same cartographic feature in the second operational mode; and displaying the selected desired cartographic entity on the video display". Person discloses in (col. 7, lines 56-60) for selecting a desired cartographic entity. Person discloses Fig. 4 more than two operational modes (all, cities, roads, land) and the power on initialize that determining an operational mode of the navigation system. Person discloses (Col. 3,lines 5-12) that his navigation system does not require inputting settings into the system before making use of it, unlike other navigational systems and is significantly less costly to build than systems requiring the attachment of bearing and speed sensors to a moving vehicle, reading the results into the device, and computing the present location and heading from such ever-changing data. By knowing the speed of system the distance and time can be calculated using this formula: X(destination)=V(speed)T (time). As the vehicle moves the display is updating the current information. Person does not explicitly specify the terms "on" and "off" roads modes, see rejection of claim 3.

6. Claim 9,

Regarding claim 9, "determining an operational mode of the navigation system, wherein the navigation system includes first and second operational modes and the less detailed desired cartographic entity is defined by perimeter with cross-hatching within the perimeter and the more detailed desired cartographic entity is defined by the perimeter with solid shading disposed within the perimeter; selecting a desired cartographic entity for a cartographic feature base upon the operational mode, including selecting a less detailed desired cartographic entity for the cartographic feature in the first operational mode and selecting a more detailed desired cartographic entity than the less detailed cartographic entity for the same cartographic feature in

the second operational mode; and displaying the selected desired cartographic entity on video display". Person discloses in (col. 7, lines 56-60) for selecting a desired cartographic entity. Person discloses Fig. 4 more than two operational modes (all, cities, roads, land) and the power on initialize that determining an operational mode of the navigation system. Person discloses (Col. 3,lines 5-12) that his navigation system does not require inputting settings into the system before making use of it, unlike other navigational systems and is significantly less costly to build than systems requiring the attachment of bearing and speed sensors to a moving vehicle, reading the results into the device, and computing the present location and heading from such ever-changing data. By knowing the speed of system the distance and time can be calculated using this formula: X(destination)=V(speed)T (time). As the vehicle moves the display is updating the current information. Person discloses Fig. 3 a graphic color memory 79 stores data of primary colors and is coupled with a color generator 80 and is accessible through multiplexer 67 to the microprocessor 55 and the display device 17 for providing various graded color data. Person does not explicitly specify the terms "on" and "off" roads modes, see rejection of claim 3.

7. Claim 11

Regarding claim 11, "determining an operational mode of the navigation system; selecting a first cartographic entity for a first cartographic feature base upon the operational mode, wherein the first cartographic entity is a vehicle route having a first intensity, and selecting a second intensity for a second desired cartographic entity for a second cartographic feature which is different than the first intensity; and simultaneously displaying the first and second desired cartographic entities on video display". Person discloses in (col. 7, lines 56-60) for selecting a desired cartographic entity. Person discloses Fig. 4 more than two operational modes (all, cities, roads,

land) and the power on initialize that determining an operational mode of the navigation system. Person discloses (Col. 3,lines 5-12) that his navigation system does not require inputting settings into the system before making use of it, unlike other navigational systems and is significantly less costly to build than systems requiring the attachment of bearing and speed sensors to a moving vehicle, reading the results into the device, and computing the present location and heading from such ever-changing data. By knowing the speed of system the distance and time can be calculated using this formula: X(destination)=V(speed)T (time). As the vehicle moves the display is updating the current information. Person discloses in Fig 3. a light control switch 27 on the operation control section 18 controls a light source to allow use of the navigational apparatus during non-daylight hours. The light source (not shown) may be located on the lid to direct light on the operation control and keyboard sections 18 and 19, or may be located beneath the surface of the housing to backlight the keys and switches. Also Person discloses in Fig. 3 that a radius generation program 76 in memory 75 graphically display a radius of the appropriate points or landmarks within the selected radius on the screen. Person does not explicitly specify the terms "on" and "off" roads modes, see rejection of claim 3.

8. Claims 12 –15,

Regarding claim 12, "wherein the first and second intensities are selected from a color palette having a plurality of colors"; Regarding claim 13, "wherein the first and second intensities are selected a color palette having a plurality of colors"; Regarding claim 14, "wherein each of the plurality of colors are defined by green, and red values with the first intensity having first blue, green, and red values and the second intensity having second blue, green, and red values that are a percentage of the glue, green, and red values, respectively"; Regarding claim 15, "wherein the

first intensity is approximately twenty percent less than the second intensity wherein the first blue, green, and red values are approximately twenty-five percent less than the second blue, green, and red values, respectively.

Person discloses in Claim 19 and (col. 10, lines 43-54) the character memory 66, population center memory 69, landmark memory 71, roadway or linear memory 73, radius memory 75, path memory 77 (and optional graphic color memory 79) are each accessible, through multiplexer 67, to the microprocessor 55 and display control circuit 65. Data output from the character generator 67, population center generator 70, landmark generator 72, roadway or linear generator 74, radius generator 76, path generator 78 (and optional graphic color generator 80) is transmitted to the display device 17 through a video controller 68. Also in (Col. 7, lines 40-49) a control switch 46 causes a display on the screen of a dot representing only cities or population centers falling in whole or in part within the radius around the current or designated location, and displays at the same time the mileage between the location and the destination and the bearing or direction to the destination. The dot is positioned on the screen relative to the latitude and longitude of the population center it represents. In more sophisticated systems, each type of population center may be further distinguished by size of the dot or different colors. Color generator generates the combination of following colors (blue, green and red) in display. Person does not explicitly specify the terms "on" and "off" roads modes, see rejection of claim 3.

9. Claim 17

Regarding claim 17, "at least one position determining device for providing a vehicle location signal; a database having a map with cartographic features and cartographic entities for representing said cartographic features; a processor interconnected to said at least one

positioning device and said database for determining the location of the vehicle relative to said map; a video display connected to said processor for displaying an area of said map; a plurality of operational modes each displaying said map area, wherein said processor determines an operational mode from said plurality of said operational modes and selects a desired cartographic entity for a cartographic feature based upon said operational mode, said processor displaying said selected desired cartographic entity on said video display, wherein said plurality of operational modes includes first and second operational modes, and said processor selects a less detailed desired cartographic entity for said said cartographic feature in said first operational mode and selects a more detailed desired cartographic entity than said less detailed desired cartographic entity for said same cartographic feature in said second operational mode, and wherein said first operational mode comprises on-road mode in which a vehicle position is displayed relative to a road system and said second operational mode comprises off-rode mode in which said vehicle position is displayed irrelative to a road system", Person discloses (Col. 15, lines 1-3) the effect of this invention is to tailor a more detailed electronic map to the precise needs of the user, thereby filtering out the unnecessary information and permitting significantly more useful information within the confines of the display screen. Person discloses in Fig. 4 more than two operational modes (all, cities, roads, land). Person discloses in (col. 14, lines 50-55) that user may set a desired radius from current location. Person illustrates in Fig. 2 the microcomputer unit (processor) that receives information from its sources and calculates the location. See Fig. 4 for plurality of operational modes. Person does not explicitly specify the terms "on" and "off" roads modes, see rejection of claim 3.

10. Claim 18

Regarding claim 18, "wherein said plurality of operational modes les first and second operational modes, and said processor selects a less detailed desired cartographic entity for said first operational mode and selects a more detailed desired cartographic entity than said less detailed desired cartographic entity for said second operational mode"; "wherein said less detailed desired cartographic is no cartographic entity". Person discloses (Col. 15, lines 1-3) the effect of this invention is to tailor a more detailed electronic map to the precise needs of the user, thereby filtering out the unnecessary information and permitting significantly more useful information within the confines of the display screen. Person does not explicitly specify the terms "on" and "off" roads modes, see rejection of claim 3.

11. Claims 22 and 23

Regarding claims 22 and 23, "wherein said first operational mode is defined by a predetermined vehicle speed"; "wherein said first operational mode comprises a panning mode".

Person discloses (Col. 3,lines 5-12) that his navigation system does not require inputting settings into the system before making use of it, unlike other navigational systems and is significantly less costly to build than systems requiring the attachment of bearing and speed sensors to a moving vehicle, reading the results into the device, and computing the present location and heading from such ever-changing data. By knowing the speed of system the distance and time can be calculated using this formula: X(destination)=V(speed)T (time). As the vehicle moves the display is updating the current information. Person does not explicitly specify the terms "on" and "off" roads modes, see rejection of claim 3.

12. Claim 24,

Regarding claim 24, "wherein said less detailed desired cartographic is defined by a perimeter with cross-hatching disposed within said perimeter and said detailed desired cartographic entity is defined by said perimeter with solid shading disposed within said perimeter".

Person discloses Fig. 3 a graphic color memory 79 stores data of primary colors and is coupled with a color generator 80 and is accessible through multiplexer 67 to the microprocessor 55 and the display device 17 for providing various graded color data. Person does not explicitly specify the terms "on" and "off" roads modes, see rejection of claim 3.

13. Claims 25-28

Regarding claims 25 and 26, "determining an operational mode of the navigation system; selecting a first desired intensity for a first desired cartographic entity defining a focal cartographic entity based upon the operational mode; and simultaneously displaying the first desired cartographic entity on the video display at the desired intensity"; wherein the focal cartographic entity is a vehicle route having an vehicle route intensity and includes selecting the desired intensity for the desired cartographic entity which is different than the vehicle route intensity", The step of claim 26 is obvious see rejection of claim 3. Komura teaches when the respective positions are displayed in superposition of the map data in, for example, different colors in accordance with the probability densities, the user of the navigation system can know the estimated situation of the current positions more precisely every moment, and the risk at which the user is puzzled by an estimation error can be made less than with a method wherein only one current position is displayed. Person discloses in (col. 7, lines 56-60) for selecting a desired cartographic entity. Person discloses Fig. 4 more than two operational modes (all, cities, roads, land) and the power on initialize that determining an operational mode of the navigation

system. Person does not explicitly specify the terms "on" and "off" roads modes, see rejection of claim 3.

14. Claims 29 and 30,

Regarding claims 29 and 30, "wherein each of the plurality of colors are defined by green, and red values with the vehicle route intensity having first blue, green, and red and the second desired intensity having second blue, green, and red values that are a percentage of the first blue, green, and red values, respectively"; "wherein the desired intensity is approximately 25% less than the vehicle route intensity wherein the first blue, green, and red values are approximately 25% less than the second blue, green and red values respectively". The step is obvious because Komura teaches when the respective positions are displayed in superposition of the map data in, for example, different colors in accordance with the probability densities, the user of the navigation system can know the estimated situation of the current positions more precisely every moment, and the risk at which the user is puzzled by an estimation error can be made less than with a method wherein only one current position is displayed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
Examiner
Art Unit 2672

Javid Amini

JEFFERY BRIER
PRIMARY EXAMINER